HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Trace Analysis, Inc.

Certificate of Analysis Number:

09031109

Report To:		**Project Name:**	**109819-10,190830-1**
Trace Analysis, Inc.		**Site:**	**Lubbock, Texas**
Liz Givens		**Site Address:**	
6701 Aberdeen Avenue			
Suite 9		**PO Number:**	
Lubbock		**State:**	**Texas**
TX		**State Cert. No.:**	**T104704205-06-TX**
79424-		**Date Reported:**	**4/7/2009**
ph: (806) 794-1296	**fax:**		

This Report Contains A Total Of 8 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

4/7/2009

Date

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HOUSTON, TX 77054
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Case Narrative for:

Trace Analysis, Inc.

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ph: (806) 794-1296	fax:		

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report (" mg\kg-dry " or " ug\kg-dry ").

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Due to limited sample volume, a Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was not extracted with Batch ID: 88978 for the Chlorinated Herbicides analysis by Method 8151A. A Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) were extracted with the analytical batch and serve as the batch quality control (QC). The LCS and LCSD recovered acceptably and precision criteria were met.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Erica Cardenas

Erica Cardenas
Project Manager

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

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Report To:	**Trace Analysis, Inc.** **Liz Givens** **6701 Aberdeen Avenue** **Suite 9** **Lubbock** **TX** **79424-** **ph: (806) 794-1296** **fax: (806) 794-1298**	**Project Name:**	**109819-10,190830-1**
		Site:	**Lubbock, Texas**
		Site Address:	
		PO Number:	
		State:	**Texas**
		State Cert. No.:	**T104704205-06-TX**
Fax To:		**Date Reported:**	**4/7/2009**

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
190819-10	09031109-01	Water	3/18/2009 12:48:00 PM	3/24/2009 10:00:00 AM		☐
190830-1	09031109-02	Water	3/18/2009 12:48:00 PM	3/24/2009 10:00:00 AM		☐

Erica Cardenas
Project Manager

4/7/2009
Date

Kesavalu M. Bagawandoss
Laboratory Director

Ted Yen
Quality Assurance Officer

HOUSTON LABORATORY
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Client Sample ID: 190819-10 **Collected:** 03/18/2009 12:48 **SPL Sample ID:** 09031109-01

Site: Lubbock, Texas

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORINATED HERBICIDES BY METHOD 8151A			**MCL**	**SW8151A**	**Units: ug/L**		
2,4,5-T	ND		1	1	04/03/09 14:02	E_S1	4976087
2,4,5-TP (Silvex)	ND		1	1	04/03/09 14:02	E_S1	4976087
2,4-D	ND		1	1	04/03/09 14:02	E_S1	4976087
2,4-DB	ND		1	1	04/03/09 14:02	E_S1	4976087
Dicamba	ND		1	1	04/03/09 14:02	E_S1	4976087
Dichloroprop	ND		1	1	04/03/09 14:02	E_S1	4976087
Dinoseb	ND		1	1	04/03/09 14:02	E_S1	4976087
MCPA	ND		25	1	04/03/09 14:02	E_S1	4976087
MCPP	ND		25	1	04/03/09 14:02	E_S1	4976087
Surr: DCAA	101		% 18-176	1	04/03/09 14:02	E_S1	4976087

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	03/25/2009 6:57	N_M	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

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Client Sample ID: 190830-1 **Collected:** 03/18/2009 12:48 **SPL Sample ID:** 09031109-02

Site: Lubbock, Texas

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORINATED HERBICIDES BY METHOD 8151A			**MCL**	**SW8151A**	**Units: ug/L**		
2,4,5-T	ND		1	1	04/03/09 14:21	E_S1	4976088
2,4,5-TP (Silvex)	ND		1	1	04/03/09 14:21	E_S1	4976088
2,4-D	ND		1	1	04/03/09 14:21	E_S1	4976088
2,4-DB	ND		1	1	04/03/09 14:21	E_S1	4976088
Dicamba	ND		1	1	04/03/09 14:21	E_S1	4976088
Dichloroprop	ND		1	1	04/03/09 14:21	E_S1	4976088
Dinoseb	ND		1	1	04/03/09 14:21	E_S1	4976088
MCPA	ND		25	1	04/03/09 14:21	E_S1	4976088
MCPP	ND		25	1	04/03/09 14:21	E_S1	4976088
Surr: DCAA	107		% 18-176	1	04/03/09 14:21	E_S1	4976088

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	03/25/2009 6:57	N_M	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Trace Analysis, Inc.

109819-10,190830-1

Analysis: Chlorinated Herbicides by Method 8151A **WorkOrder:** 09031109
Method: SW8151A **Lab Batch ID:** 88978

Method Blank

RunID: HP_9_090403C-4976091 Units: ug/L
Analysis Date: 04/03/2009 15:17 Analyst: E_S1
Preparation Date: 03/25/2009 6:57 Prep By: N_M Method SW3510C

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09031109-01A	190819-10
09031109-02A	190830-1

Analyte	Result	Rep Limit
2,4,5-T	ND	1.0
2,4,5-TP (Silvex)	ND	1.0
2,4-D	ND	1.0
2,4-DB	ND	1.0
Dicamba	ND	1.0
Dichloroprop	ND	1.0
Dinoseb	ND	1.0
MCPA	ND	25
MCPP	ND	25
Surr: DCAA	73.6	18-176

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: HP_9_090403C-4976089 Units: ug/L
Analysis Date: 04/03/2009 14:40 Analyst: E_S1
Preparation Date: 03/25/2009 6:57 Prep By: N_M Method SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
2,4,5-T	2.00	1.31	65.4	2.00	1.32	65.9	0.7	48	20	165
2,4,5-TP (Silvex)	2.00	1.68	84.0	2.00	1.69	84.6	0.7	49	25	158
2,4-D	2.00	1.23	61.5	2.00	1.28	64.0	3.9	48	10	170
2,4-DB	2.00	2.14	107	2.00	1.95	97.3	9.4	56	10	203
Dicamba	2.00	1.58	78.9	2.00	1.59	79.3	0.5	56	14	174
Dichloroprop	2.00	1.45	72.4	2.00	1.45	72.7	0.4	65	32	180
Dinoseb	2.00	1.91	95.4	2.00	1.91	95.6	0.3	46	10	130
MCPA	200	145	72.7	200	146	73.0	0.4	57	17	130
MCPP	200	150	75.2	200	148	74.0	1.5	32	13	132
Surr: DCAA	2.00	1.70	84.8	2.00	1.69	84.6	0.2	30	18	176

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

Sample Receipt Checklist

And

Chain of Custody

HOUSTON LABORATORY
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Sample Receipt Checklist

Workorder:	**09031109**	Received By:	**CAW**
Date and Time Received:	**3/24/2009 10:00:00 AM**	Carrier name:	**Fedex-Priority**
Temperature:	**3.0°C**	Chilled by:	**Water Ice**

1.	**Shipping container/cooler in good condition?**	Yes ☑	No ☐	Not Present ☐		
2.	**Custody seals intact on shippping container/cooler?**	Yes ☑	No ☐	Not Present ☐		
3.	**Custody seals intact on sample bottles?**	Yes ☐	No ☐	Not Present ☑		
4.	**Chain of custody present?**	Yes ☑	No ☐			
5.	**Chain of custody signed when relinquished and received?**	Yes ☑	No ☐			
6.	**Chain of custody agrees with sample labels?**	Yes ☑	No ☐			
7.	**Samples in proper container/bottle?**	Yes ☑	No ☐			
8.	**Sample containers intact?**	Yes ☑	No ☐			
9.	**Sufficient sample volume for indicated test?**	Yes ☑	No ☐			
10.	**All samples received within holding time?**	Yes ☑	No ☐			
11.	**Container/Temp Blank temperature in compliance?**	Yes ☑	No ☐			
12.	**Water - VOA vials have zero headspace?**	Yes ☐	No ☐	VOA Vials Not Present ☑		
13.	**Water - Preservation checked upon receipt (except VOA*)?**	Yes ☐	No ☐	Not Applicable ☑		

***VOA Preservation Checked After Sample Analysis**

SPL Representative: | **Contact Date & Time:**

Client Name Contacted:

Non Conformance Issues:

Client Instructions:

LAB Order ID #

09031109

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

8808 Camp Bowie Blvd. West, Suite 180
Ft. Worth, Texas 76116
Tel (817) 201-5260
Fax (817) 560-4336

Company Name: **Phone #:**

Address: **(Street, City, Zip)** **Fax #:**

Contact Person: Liz Givens **E-mail:**

Invoice to:
(If different from above)

Project #: **Project Name:**

Project Location (including state): **Sampler Signature:**

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE		PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE		SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Herbicides				Turn Around Time if different from standard	Hold
	190819-10	1		X												3-18-09	12:48																		X					
	190 830-1	1		X												3/18/09	12:48																		X					

RUSH

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Carol Fox	Trace	3/23/09	3:45 pm					INST °C / OBS °C / COR °C
								INST °C / OBS °C / COR °C
				Carol White		3/24/09	1006	INST °C / OBS °C / COR °C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review

REMARKS: 9032013 SPL
3.0°C

- [ ] Dry Weight Basis Required
- [ ] TRRP Report Required
- [ ] Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier #

ORIGINAL COPY